

CLAIMS

What is claimed is:

5 1 A method for integrating a user interface across multiple operating modes of a digital camera having a display, wherein when the digital camera is placed into each one of the multiple operating modes, mode-specific items corresponding to that mode are displayed on the display, the digital camera including a first button and a second button for interacting with the multiple operating modes, the first button having a first orientation and the second button having a second orientation, the method comprising the steps of:

- a) mapping an aligned set of mode-specific items in the display to the orientation of the first button to create a mapped navigation button;
- b) scrolling from one mode-specific item to the next in the aligned set by pressing the mapped navigation button wherein the display indicates which of the mode-specific items is a currently active item; and
- c) displaying additional information corresponding to the currently active item in the display in a location that is offset from the active item in a direction of orientation corresponding to that of the second button.

10 2 The method as in claim 1 wherein when the camera is placed into a first mode, the additional information includes a list of information items, the method further including the steps of:

- c1) displaying the list of information items in an alignment corresponding to the orientation of the second button; and
- d) scrolling through the list of information items by pressing the second button.

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3 The method as in claim 2 wherein step b) further includes the step of:
b1) providing the first button with left and a right navigation buttons having a horizontal orientation.

4 The method as in claim 3 wherein step c) further includes the step of:
c2) providing the second button with up and down navigation buttons having a vertical orientation.

5 The method as in claim 4 further including the step of displaying a set of menu icons as the mode-specific items while in the first operating mode.

6 The method as in claim 5 further including the step of pressing the down navigation button to scroll through the list of information items corresponding to the currently active item.

7 The method as in claim 4 further including the step of providing a second operating mode wherein when the digital camera is placed into the second operating mode, a set of thumbnail images corresponding to captured images are displayed as the mode-specific items.

8 The method as in claim 7 further including the step of displaying a large thumbnail as part of the additional information.

9 The method as in claim 4 further including the step of providing a third operating mode wherein when the digital camera is placed into the third operating mode, a set of

icons representing camera features are displayed as the mode-specific items.

11. 10 The method as in claims 9 further including the step of changing a particular one of the camera features by pressing one of the up and down navigation buttons to change a
5 state of the corresponding icon.

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11 A digital camera having an integrated user interface; comprising:
an image device for capturing image data;
a memory coupled to the imaging device for storing the image data as captured
images;
5 a display;
a first set of navigation buttons having a first orientation;
a second set of navigation buttons having a second orientation;
multiple operating modes for supporting a plurality of digital camera functions; and
a processor coupled to the image device, the memory, the display and to the first
10 and second set of navigation buttons for controlling operation of the digital camera and
the multiple operating modes, wherein the processor includes,
means responsive to the digital camera being placed into at least two of the
multiple operating modes for displaying a set of mode-specific items in the display in an
alignment that is mapped to the orientation of the first set of navigation buttons,
15 means for scrolling from one mode-specific item to the next in the set in response
to a user pressing the first set of navigation buttons, wherein an indication in the display
indicates which of the mode-specific items is a currently active item, and
means for displaying additional information corresponding to the currently active
item in the display in a location that is offset from the active item in a direction of
20 orientation corresponding to that of the second set of navigation buttons.

12 The digital camera of claim 11 wherein when the digital camera is placed into a
first operating mode, the additional information includes a list of information items,
wherein the processor further includes,
25 means for displaying the list of information items in an alignment corresponding to

the orientation of the second set of navigation buttons; and

means for scrolling through the list of information items in response to the user pressing the second navigation button.

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5 13 The digital camera as in claim 12 wherein the first set of navigation buttons have a horizontal orientation and the second set of navigation buttons have a vertical orientation.

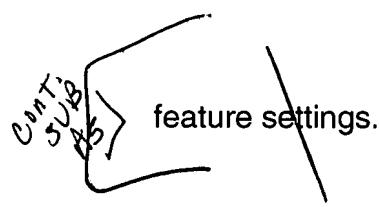
14 The digital camera as in claim 13 wherein in the first operating mode the menu-specific items comprise icons representing menu categories.

15 16 The digital camera as in claim 14 wherein as the user presses the first set of navigation buttons to scroll through the set of icons, each of the icons is highlighted, and becomes an active icon in response to the user pressing one of the second set of navigation buttons.

15 16 The digital camera as in claim 15 wherein when the digital camera is placed into a second operating mode the menu-specific items comprise thumbnails representing captures images.

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20 17 The digital camera as in claim 16 wherein when the digital camera is placed into the second operating mode the additional information includes a large thumbnail representing of the currently active item.

18 The digital camera as in claim 17 wherein when the digital camera is placed into a third operating mode the menu-specific items comprise icons representing camera



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20 19 The digital camera as in claim 18 wherein when the digital camera is placed into the third operating mode the additional information includes text representing the feature setting of the currently active item.

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20 20 The digital camera as in claim 19 wherein the digital camera further includes a status display wherein when the digital camera is placed into the third operating mode the mode-specific items and the additional information are displayed in the status display.

20 19 The digital camera further includes a status display wherein when the digital camera is placed into the third operating mode the mode-specific items and the additional information are displayed in the status display.

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21 A method for integrating a user interface across multiple operating modes of a digital imaging device, the digital imaging device including a display, and a navigational device including first and second control buttons for controlling the display, the method comprising the steps of:

- 5 a) placing the digital imaging device into a first operating mode;
- b) displaying a plurality mode-specific items in a horizontal row across the display;
- c) providing a user controlled horizontal interaction whereby the user presses the first control button to horizontally scroll through the plurality mode-specific items in the row, which activates individual mode-specific items with each press; and
- d) providing a vertical response from the digital imaging device wherein in a position on the display vertically offset from the plurality mode-specific items, the digital imaging device displays an optional combination of graphics and text corresponding to the activated mode-specific item; and
- e) placing the digital imaging device into a second operating mode and repeating steps b) through d), thereby improving ease of use of the digital camera.

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22 A method as in claim *21* wherein step b) further includes the step of:

- b1) displaying a plurality of thumbnail images as the mode-specific items.

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23 A method as in claim *22* wherein step d) further includes the step of:
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- d1) displaying a large thumbnail image corresponding to the activated mode-specific item.

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²⁴ A method as in claim ²³ wherein step d) further includes the step of:
d2) displaying text of an image name and date corresponding to the activated mode-specific item.

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²⁵ A method as in claim ²¹ wherein step b) further includes the step of:
b1) displaying a plurality of icons as the mode-specific items.

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²⁶ A method as in claim ²⁵ wherein step d) further includes the step of:
d1) displaying a text feature list corresponding to the activated mode-specific item.

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²⁶ A method as in claim ²⁵ wherein step d) further includes the step of:
d1) displaying text corresponding to a state of the activated mode-specific item.

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28 A digital camera having an integrated user interface; comprising:
an image device for capturing image data;
a memory coupled to the imaging device for storing the image data as captured images;

5 a first set of navigation buttons having a first orientation and a second set of navigation buttons having a second orientation for controlling navigation in the display;

10 a processor coupled to the image device, the memory, the primary display and to the first and second set of navigation buttons for controlling operation of the digital camera including a first operating mode and a second operating mode;

15 a primary display coupled to the processor, the primary display being divided into a first set of elements aligned with the orientation of the first set of navigation buttons and a second element displayed offset from the first set of elements in a direction aligned with the orientation of the second set of navigation buttons, wherein when the camera is in the first operating mode, a user navigates the first set of elements using the first set of navigation buttons and navigates the second element using the second set of navigation buttons; and

20 a status display coupled to the processor, the status display being divided into a third set of elements and a fourth set of elements, wherein the third set of elements is aligned with the orientation of the first set of navigation buttons and the fourth element is displayed offset from the third set of elements in a direction of orientation corresponding to that of the second set of navigation buttons, wherein when the camera is in the second operating mode, the user navigates the third set of elements using the first set of navigation buttons and navigates the second element using the second set of navigation buttons, whereby navigation of the second operating mode in the status display is similar 25 to navigation of the first operating mode in the primary display.

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29 The digital camera as in claim 28 further including a first status control button and a second status control button wherein the user navigates the status display using the first and second status control buttons.

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